

## ABSTRACT OF DISCLOSURE

A host system is provided with one or more host-fabric adapters installed therein for connecting to a switched fabric of a data network. The host-fabric adapter may comprise at least one Micro-Engine (ME) arranged to establish connections and support data transfers via a switched fabric; a serial interface arranged to receive and transmit data packets from the switched fabric for data transfers; a host interface arranged to receive and transmit host data transfer requests, in the form of descriptors, from the host system for data transfers; a context memory having a bandwidth-optimized, area minimal vertically sliced memory architecture arranged to provide context information necessary for data transfers; and a doorbell manager arranged to update the context information needed for the Micro-Engine (ME) to process host data transfer requests for data transfers.